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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION N
10/624,724	07/21/2003	Michael A. Faltys	AB-131UI	7547
23845	7590	11/03/2004		
ADVANCED BIONICS CORPORATION 25129 RYE CANYON ROAD VALENCIA, CA 91355				
EXAMINER MULLEN, KRISTEN DROESCH				
ART UNIT			PAPER NUMBER	
3762				

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,724

Applicant(s)

FALTYS ET AL.

Examiner

Kristen Mullen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/24/04 (IDS).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 4, 8-11, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/21/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/23/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, and 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Schallhorn et al. (6,473,653).

Regarding claim 1, Schallhorn et al. shows an active electrode comprising at least four banks of active electrodes, wherein each bank of active electrodes includes a plurality of active electrodes wherein each active electrode comprises a plurality of individual electrode contacts (20, 21) and an active switch (CT1, CT2) integrally formed with the individual electrode contacts for individually activating the plurality of individual electrode contacts with a selected electrode stimulation current in response to electrode control signals (Figs. 6-8; Col. 5, line 63-Col. 6, line 19).

With respect to claim 2 Schallhorn et al. shows the plurality of individual electrodes included within each active electrode comprises at least one lateral electrode contact (20) and at least one medial electrode contact (21) (Fig. 6).

Regarding claim 3, Schallhorn et al. shows each active electrode includes a silicon die and switching circuitry hermetically sealed on the silicon die and operatively connected to the lateral and medial electrode contacts, wherein the switching circuitry

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responds to the electrode control signals to selectively activate one or both of the medial or lateral electrode contacts (Figs. 6-8; Col. 5, line 63-Col. 6, line 19; Col. 8, lines 3-8)

With respect to claim 5 Schallhorn et al. shows an active electrode array comprising a plurality of active electrodes, wherein each active electrode includes switching circuitry (CT1, CT2) built into the electrode array and a plurality of individual electrode contacts (20, 21) that may be individually activated by electrode control signals applied to the switching circuitry (Figs. 6-8; Col. 5, line 63-Col. 6, line 19).

Regarding claim 6, Schallhorn et al. shows the active electrode array includes at least four active electrodes (Fig. 6).

With respect to claim 7, Schallhorn et al. shows the plurality of individual electrode contacts included within each active electrode comprises at least one lateral electrode contact (20) and at least one medial electrode contact (21) (Figs. 6-8).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schallhorn et al. (6,473,653).

Regarding claim 12, Schallhorn shows an active electrode array comprising a flexible carrier in which wires are embedded, an active electrode array at or near a distal end of the flexible carrier comprising at least $2n$ electrode contacts, where n is an integer

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of at least 4, switching circuitry located at or near the distal end of the flexible carrier adjacent the electrode contacts, said switching circuitry being responsive to control signals presented on at least a plurality of the wires so as to direct a stimulation signal presented on another of the wires to a selected pair of the electrode contacts, and means for connecting the wires at a proximal end of the flexible carrier to electronic circuitry adapted to generate the control signals and stimulation signal; whereby at least $2n$ electrodes located at the distal end of the flexible carrier may be connected for individual control through no more than $n+1$ wires embedded within the flexible carrier. Although Schallhorn fails to show there are $n+1$ wires embedded in the flexible carrier rather there are only 3 wires, it has been held that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124, (CCPA 1960). Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the number of wires embedded in the flexible carrier to be at least 5 since it has been held that the mere duplication of parts has no patentable significance.

With respect to claim 13, Schallhorn et al. shows at least $2n$ electrode contacts included within the active electrode array comprises at least n lateral electrode contacts and at least n medial electrode contacts (Figs 6-8).

Regarding claim 14, Schallhorn et al. shows the switching circuitry comprises a silicon die on which switching circuitry has been formed and hermetically sealed and operatively connected to the lateral and medial electrode contacts, wherein the switching circuitry responds to the electrode control signals to selectively activate selected ones of

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the medial or lateral electrode contacts (Figs. 6-8; Col. 5, line 63-Col. 6, line 19; Col. 8, lines 3-8).

Allowable Subject Matter

5. Claims 4, 8-11, 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 4, the prior art of record fails to teach or suggest an active electrode comprising at least four banks of active electrodes, wherein each bank of active electrodes includes a plurality of active electrodes wherein each active electrode comprises a plurality of individual electrode contacts comprising at least one lateral electrode contact and at least one medial electrode contact and an active switch integrally formed with the individual electrode contacts for individually activating the plurality of individual electrode contacts with a selected electrode stimulation current in response to electrode control signals, each active electrode includes a silicon die and switching circuitry hermetically sealed on the silicon die and operatively connected to the lateral and medial electrode contacts, wherein the switching circuitry responds to the electrode control signals to selectively activate one or both of the medial or lateral electrode contacts, all in combination with each bank of the active electrodes comprise a stack of the silicon dies of each active electrode belonging to that bank, over-molded with silastic.

With respect to claims 8-11, the prior art of record fails to teach or suggest shows an active electrode array comprising a plurality of active electrodes, wherein each active electrode includes switching circuitry built into the electrode array and a plurality of individual electrode contacts that may be individually activated by electrode control

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signals applied to the switching circuitry, all in combination with the switching circuitry of each active electrode comprising decoding circuitry, a first switch coupled to the decoding circuitry and the at least one lateral electrode contact, and a second switch coupled to the decoding circuitry and the at least one medial electrode contact, wherein the decoding circuitry responds to the electrode control signals and causes the first and second switches to selectively activate one or both of the medial or lateral electrode contacts.

Regarding claims 15-16, the prior art of record fails to teach or suggest an active electrode array comprising a flexible carrier in which $n+1$ wires are embedded, where n is an integer of at least 4, an active electrode array at or near a distal end of the flexible carrier comprising at least $2n$ electrode contacts, switching circuitry located at or near the distal end of the flexible carrier adjacent the electrode contacts, said switching circuitry being responsive to control signals presented on at least a plurality of the $n+1$ wires so as to direct a stimulation signal presented on another of the $n+1$ wires to a selected pair of the electrode contacts, and means for connecting the $n+1$ wires at a proximal end of the flexible carrier to electronic circuitry adapted to generate the control signals and stimulation signal; whereby at least $2n$ electrodes located at the distal end of the flexible carrier may be connected for individual control through no more than $n+1$ wires embedded within the flexible carrier, all in combination with the switching circuitry of each active electrode comprising decoding circuitry, a first switch coupled to the decoding circuitry and the at least one lateral electrode contact, and a second switch coupled to the decoding circuitry and the at least one medial electrode contact, wherein the decoding circuitry responds to the electrode control signals and causes the first and

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second switches: to selectively activate one or both of the medial or lateral electrode contacts.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristen Mullen whose telephone number is 703-605-1185.

The examiner can normally be reached on 10:30 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 703-308-5181. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KDM

Kristen Mullen

Angela D. Sykes

ANGELA D. SYKES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700